

Cambridge has lowest working-class intake

by Frances Gibb

For fewer Cambridge students have parents in manual or agricultural jobs compared with those of students at other universities, according to the latest figures on student numbers in last week's Cambridge Report.

The year 19 per cent of new male students' parents had administrative and managerial jobs, 47 per cent professional and technical, 10 per cent other manual and agricultural, 34 per cent from professional and technical, 26 per cent other manual and 25 per cent agricultural.

Although the comparison is with a survey of the past five years that those national proportions do not change substantially from year to year.

Generally, however, the proportion of all students from professional and technical backgrounds has risen from 30 per cent in 1970 to 34 per cent in 1974, the proportion from manual and agricultural backgrounds has fallen from 28 per cent in 1970 to 25 per cent in 1974.

The breakdown of the parental occupations of new women students shows a similar imbalance, with 52 per cent of this year's acceptances from professional and technical backgrounds, and 10 per cent from manual and agricultural. This compares with figures for the total home student population for 1974 of 34 per cent and 25 per cent respectively.

More Cambridge students still come from direct grant and independent schools than do students at other universities. The average percentage of acceptances at Cambridge for men during 1971-1972 was 41 per cent from maintained schools, 18 per cent from direct grant schools, 30 per cent from independent schools and 1 per cent from further education institutions. This does not include Scottish, Northern Irish or overseas schools.

Nationally, the figures for 1974 for home candidates (male) are 52.3 per cent from maintained schools, 10.7 per cent from direct grant schools, 12.9 per cent from independent schools and 12.9 per cent from further education institutions.

Slightly more Cambridge women than men come from state schools: 43 per cent compared with 40 per cent this year, and slightly less from direct grant schools combined: 48 per cent compared with 53 per cent of the men.

Although national figures for women students from further education institutions is 12 per cent, the proportion of Cambridge acceptances is only 2 per cent. This is partly because of the greater acceptance of students from independent schools.

Nationally there are more science-based students than arts; 53 per cent compared with 47 per cent. The most popular subjects among undergraduates last year were natural sciences, which was taken by 44.9 per cent, law (31.1 per cent), engineering (27.3 per cent), and medicine (27.3 per cent). Least popular were Anglo-Saxon, Mediaeval and Celtic (0.5 per cent), computer science (0.4 per cent), electrical sciences and history of art (0.6 per cent).

Cambridge figures compare with Oxford and national figures as follows:

	1971-72	1976-77
Cambridge		
Arts-based	6,160 (55.1%)	6,200 (52.9%)
Science-based	5,016 (44.9%)	5,513 (47.1%)
Oxford		
Arts-based	7,025 (63.2%)	7,569 (62.4%)
Science-based	4,084 (36.8%)	4,552 (37.6%)
National		
Arts-based	106,000 (45.0%)	144,000 (47.0%)
Science-based	129,000 (55.0%)	162,000 (53.0%)

Many more outstanding students attracted to science

Many more outstanding students have been attracted to science than to other subjects, according to the British Association for the Advancement of Science, which held its annual conference at Lancaster last week.

In the past 10 years one would have expected every able member of the British Association of Young Scientists and the British Association of Student Scientists to opt for science, he said. They had not done so because of the elements of this misconception of pure science was corrected. The British would not survive as an effective people.

The first thing we must recognize is that science, although it has expanded enormously, and with it the number of students, has not increased in proportion to the rest of the country. What does affect society directly is technology, he said.

Undergraduate engineers and scientists were swept together under the same label of science, but in fact they are two different things. The trouble started with the school syllabus. Every child who properly spends a great part of his or her school life on mathematics and the natural sciences subjects, is not fortunate if any of the teachers but his school contact with engineering.

Economists are schizophrenic, Friedman says

by David Hencke

The number of students registering for work during the summer vacation has reached a record total of 121,617—nearly five times the number for August, 1971.

The figures, released by the Department of Employment, show that the National Union of Students' campaign to encourage students to register and claim means-tested benefits of either £9.70 a week if they are living at home or £10.90 plus rent if they have rented accommodation has had considerable success over the years. They also reflect the peak in the unemployment figures, which topped 1,500,000 during the same period.

Comparative figures show that 25,900 students registered in August, 1971, 53,300 the following year, 21,700 in 1973, then 30,500 in 1974 and 99,300 last year. This year's August figure is more than 22,000 higher than last year.

August is traditionally the peak period when students register for work, although last year students registered in September were 10,800 more than in August. This year's September figures could also be higher. The period when students register is tending to be longer—last year some students registered as early as June, and there were still some registered in October.

Academic economists are schizophrenic, the leading proponent of market economics and monetarist policies, said this week.

Their intellectual allegiance to their discipline, stemming from Adam Smith, made them oppose state intervention in the market, but their self-interest made them see jobs for the boys in the expansion of state bureaucracy.

Economists are in favour of markets in general terms, but opponents of the working of particular markets. In a lecture organized by the Institute of Economic Affairs, Professor Friedman said in a lecture organized by the Institute of Economic Affairs.

Similar confusion existed in the thinking of Professor John Kenneth Galbraith, the Harvard economist, before an audience of academics, politicians and businessmen in London.

He said that Professor Galbraith's best known book, *The Affluent Society*, was devoted to denigrating the role of ordinary people and to the role of the public sector. He ignored the tendency of the public sector to impose their own conception of public needs while ignoring vast sums of money people.

It was significant, Professor Friedman said, that the theories of Professor Galbraith, which were not his own, had never caught on in the universities.

Warwick opens new building

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'Gloomy future' is predicted for university values

by David Walker

The future of the university as a centre of critical intelligence was described as gloomy to academics gathered at the British Association annual meeting this week.

In a world which discriminated against intellect, where specialists were being fragmented and reason itself was under attack, the university could hardly avoid becoming an anachronism, according to Professor Philip Reynolds, Vice-Chancellor at Lancaster University.

Universities were being shoved into too close contact with society, overrun by bureaucracy and starved of the resources needed if they were to pursue their traditional function of transmitting knowledge and furthering research.

Yet even the pursuit of truth itself was nowadays questioned. "The humane but emotional commitment of some students calls into question the primacy of the value of dispassionate rationality. Rational truth-seeking procedures are subject to attack as being methodologically false and ethically hypocritical," said Professor Reynolds.

The nature of modern society was inimical to universities. "Doctrines of relativism and nihilism are inimical to the university's role in the transmission of knowledge, including the privilege of high intelligence. Meritocracies were as much out of favour as plutocracies."

At the same time the young showed increasing reluctance to study and pay for higher education. "The unwillingness of the young to enter wealth-creating activity probably restricts economic growth and certainly restricts society's willingness to invest scarce resources."

The cost of the equipment needed for knowledge creation steadily mounted. The economies likely to be demanded of universities may be found only by curtailing this activity, and probably by reducing the work by educational technology. "Paradoxically the expansion of special movements such as these made the need for universities all the greater. Professor Reynolds said university education made possible the freedom to make

had cut off that expansion and led to abuse of the universities as ivory towers.

Even now Government actions seemed to frustrate any attempt to welcome more working class students. Fees had not kept pace with price rises, and extra money was needed for preparatory courses for older people who wished to return to full-time education.

Continuing education is not cheap, but it is essential if working class access is to be improved, and we are to build a highly educated work force that the economy needs."

The conference approved a statement recognizing that university intake was determined by social structure of society outside the university's control and pressed the general council of the TUC to continue to strive for "real equality of opportunity."

Finance was the major theme of the TUC's debates on education. The unions of teachers took the lead in opposing cuts in spending on education at every level, especially on the school level, between 16 and 19 who were at work. The National Association of School

masters—Union of Women Teachers—accused some local authorities of exploiting the flexibility allowed by the rate support grant to seek teachers.

Mr Laurie Sapper, who gave the first speech by an AUT delegate since affiliated to the TUC two months ago, warned of the trap of pinning one section of the educational world against another. The TUC should not allow the Government to drift from expenditure to expenditure but present a clear set of its own priorities.

He spoke of the special plight of university researchers who faced an unemployment rate of 15 per cent, despite the vast contribution made by university research to the balance of payments.

The growing needs of: trades unionists themselves for education were emphasized by conference. Mr Clive Jenkins, general secretary of the Association of Scientific, Technical and Managerial Staffs, called for a £3m grant towards training for trade unionists.

The trade union movement, he said, needed its own residential college to train people to become its leaders.

Competition is getting tougher, UCCA says

by Annabel Ferriman

Competition for university places is stiffer this year, particularly in accountancy, psychology and fine art, according to the Universities Central Council on Admissions.

The council, which has reported an 8.7 per cent increase in applications for entry this autumn, compared with an almost static rate of applications for the previous few years, is not expecting an equivalent rise in the number of acceptances. The increase in acceptances is likely to be about 4,000 on a total of 73,000 which represents a growth of about 5 per cent.

For the third consecutive year, the council has taken out advertisements in seven newspapers to inform potential candidates of its clearing house scheme and of the supply and demand situation with regard to different subjects. Over 20,000 people have already applied through the scheme for the 10,000 places still vacant.

The advertisement states that there are apparently more suitable candidates than places in medicine, dentistry, pharmacy, veterinary science, accountancy, law, architecture, psychology, drama and fine art, but supply and demand are fairly evenly balanced in civil engineering, physics, pharmacology, biological sciences, business management, geography, politics, social studies, English and history.

The undergraduate courses that still have a number of unfilled places make up the longest list. They include education, engineering (except civil), technology, agriculture, chemistry, geology, economics, foreign languages, philosophy, general engineering, arts and classics. The list differs from last year in that accountancy, psychology and fine art had a fairly even match of candidates to places last year, but this year are over-subscribed.

The other major difference is that civil engineering has changed from being an undersubscribed subject last year to one where supply and demand are about equal.

This change is part of an overall increase in applications for engineering courses, reported by the council in June. It is significant, however, that although the council reported a "substantial" increase in applications for engineering, both in numbers and as a proportion of the total, that mechanical and electrical still figure among the list of those subjects with vacancies.

Taking the council's forecast of total applications for 1976, the increase in applications for civil engineering is 16 per cent (5,556 total), electrical engineering, 16 per cent (3,981 total).

There has also been a substantial increase in applications for business management studies (23 per cent) for the forecast total being 3,281; for social studies (15 per cent) the forecast total 8,196; and for economics (9 per cent), though in the last case the increase was less than the 18 per cent it had been the year before.

Only in dentistry has there been a drop in the numbers applying, though in certain other subjects the numbers applying have risen. These included pharmacy, physics, West European languages, combined arts, and languages.

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Price rise

We regret that rising costs have made it necessary to increase the price of *The Times* to 18p.

Price rise

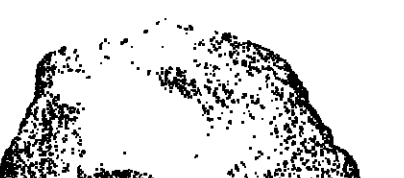
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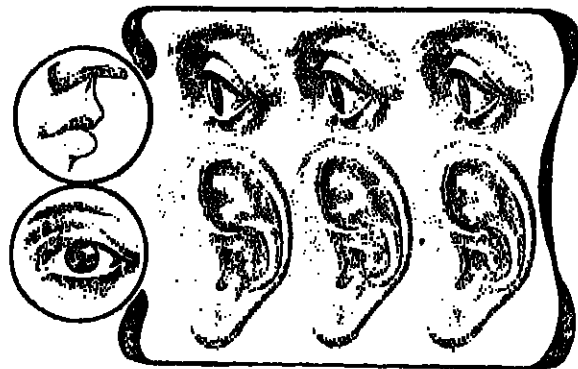
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Facts and fair dealing in copyright law



Teachers and lecturers are particularly concerned with copyright matters because they not only make extensive use of protected materials but also create and produce them in their day-to-day work. As a result, questions often raised by lecturers are "What can I copy?" and "Who owns the copyright in what I produce?" Before discussing these points some basic information on this obscure branch of the law may help.

The 1936 Copyright Act confers protection on literary works (practically anything in the form of words from a thesis to a list of football fixtures), dramatic and musical works, artistic works (paintings, drawings, maps, sculptures, photographs, engravings, etc., and works of artistic craftsmanship), sound recordings, films, broadcasts and published editions (the typographical layout of a literary, dramatic or musical work).

The period of protection is with exceptions, 50 years from the death of the author of "works" from first publication of sound recordings and films, and from first transmission of a broadcast, and 25 years from first publication of a published edition. Most materials of foreign origin are protected by virtue of Britain's international treaty obligations.

Protection gives the owner of the copyright the sole right to do, or authorize someone to do, certain acts in relation to the material. These "infringing acts" vary according to the class of material but in general include making a copy in any material form.

Although the Act stipulates who is the first owner of the copyright, it does not provide for any formality such as the registration of changes of ownership which, in other countries facilitates the tracing of copyright owners.

So, copyright extends to most of the materials used by lecturers; most individual items will be protected because of the extended term of copyright; reproduction is, in every case, a restricted act and tracing the copyright owner for permission may be difficult.

Some measure of relief is provided by the Act which stipulates that copyright is not infringed unless a substantial part is taken and case law has established that this relates to not only the proportion of the part copied but also its importance in relation to the whole. Even where a substantial part is

taken a defence of "fair dealing" may be made if the copying is for the private study of the person making the copy and the extent and circumstances can be shown to be "fair" to the copyright owner.

This provision, unlike the substantial part proviso, applies only to literary, dramatic, musical and artistic works, as do the special education arrangements in the Act. These permit teachers and pupils at school or elsewhere to reproduce "in the course of instruction". Although it is unclear whether the words "or elsewhere" cover institutions other than primary or secondary schools, it is unlikely that any copyright owner would object to such use at tertiary level. The provision is, in any case, totally inadequate because it expressly prohibits the use of duplicating appliances.

As a user of material the lecturer is under no obligation to reproduce on the blackboard literary, dramatic, musical and artistic works but photocopy extracts for distribution. Students can be asked to make a "fair dealing" but outside this is no way in which recordings and films may be legally copied without authorization either directly or by off-air recording of a broadcast.

Pending the introduction of a new Act in the 1980s, relief for the lecturer depends on reaching agreements with rights owners to permit copying in return for remuneration. An example is the scheme negotiated by The Council for Educational Technology which allows academic institutions to acquire an annual licence permitting sound recordings to be copied for curricula purposes.

Educational broadcasts may, subject to certain conditions, be recorded off-air following negotiation between the broadcaster and the performers and contributors of copyright material. The publishers of Association have set up a committee to consider what can be done to meet the need of institutions to make multiple copies of print material.

Turning to the lecturer as the creator of material, the law states that the first owner of the copyright in a sound recording or of a photograph is the owner of the material on which it is taken and the first owner of a film is the person making the arrangements for which the film is made. It will usually be the institution which

owns the copyright in presentations such as tape/slide packs, films and television programmes.

Difficulties arise over the ownership of scripts, speeches and recorded lectures because the Act says that the author is the first owner of a literary, dramatic, musical or artistic work unless the work is produced "in the course of employment under a contract of service".

Most lecturers are employed under a contract of service which means that they have a normal employee/employer relationship with the institution or authority and are not just engaged on a casual basis to give individual lectures. The term "in the course of employment" is taken to mean that the work is an integral part of the duties and failure to do so would be a breach of his contract of employment. Lecturers have traditionally kept the copyright in their lecture notes but it is recognized that their creation was not the purpose for which they were engaged but was purely for the convenience of the author.

It is the contribution of scripts to presentations produced by the institutions which has created the present problems and which makes it desirable that the copyright status of all material be defined in the contract of employment or at least in a formal written agreement before production is commenced. The University Grants Committee Teachers' Association of University Teachers have issued standard forms of agreements and a Code of Practice and the adoption of formal procedures between lecturers and institutions would do much to ease the distribution of material.

Final point, under the terms of the written permission of a performer of a literary, dramatic or musical work is required before recording or film is made, unless it is made for private purposes. Lecturers may wish to bear this in mind when recording performances or indeed being recorded themselves.

Geoffrey Crabb

Further information on the licensing schemes and publications mentioned in this article can be obtained from Mr Geoffrey Crabb, The Rights Development Office, Council for Educational Technology, 3, Devonshire Street, London, W1.

New survey of media aids

It is too little to begin by saying that this booklet, *Technical Aids to Teaching in Higher Education*, "isn't what you expect" but it is not. This is a great pity because the large numbers of people who should read it will be put off first by the title and second by the cover design into believing that it is nothing more than another of these "do it yourself" monographs talking about, teaching, and about the findings of research into the use and application of media in learning and teaching.

The first half of the book takes us up to the year 1971 as the first edition did. It is substantially the same but with a very few minor corrections. The second half presents the changing scene from 1971 up to and including 1975.

The pattern of the first book is maintained so that the new material falls again under the general headings of general development, recorded sound, film, television, learning, mixed systems and computers.

Any book that attempts to summarize research papers is, inevitably, not as easy to write. The authors have done a very good job within the constraints, for in only 18 pages they have outlined

the work which resulted in some hundred publications over five years.

Inevitably when the authors have had to summarize a chapter of a publication in a single sentence and evaluate it both for its content and in relation to other publications, some distortion in meaning may occur and there must be some loss of nuance and consistency.

Despite the most glaring inconsistencies in the conclusions drawn, in the conclusion to the first edition we are told that "we are living in the middle of a technological revolution, and it would be surprising if in such a period of change we were able to make any final definitive pronouncements".

This, in 1971, and supported by a hundred or so research papers, was a brave new world. Stephen Leacock's *Nonsense Novels and Psychology* in the 1950s; cover only a five-year period from 1965 to 1970.

Yet five years later in the second edition the authors can state "On the whole there has not been much significant alteration". Presumably the technological revolution is over? But these five years have seen the revolution of the comparatively cheap video cassette and the

accompanying total change from teacher-centred teaching to student-centred self access learning, admittedly not yet fully implemented but nevertheless clearly here.

Here lies the root of the authors' problem. They are too close to the change in time and because they are reviewing papers they are backward rather than forward looking. Their work is valuable though and a point to unerringly and it can be summarized in two sentences. Staff and students like to learn and "Will the academic body live up to its duty to be weaned away from that piece of teaching-learning fiction called the lecture."

Technical Aids to Teaching in Higher Education by Colin Flood Page and John Kitching.

The Society for Research into Higher Education Ltd, £2.90, SRHE Members £2.20

Harry Creaser

Harry Creaser is director of The Audio-Visual Centre, York University.

Makers and users urged to collaborate at Ed Tech '76

The need for collaboration between makers and users of educational equipment and materials was urged by Dr Lehmann, past chairman of the Industrial Council for Educational and Training Technology Ltd (ICETT), at the opening of the Ed Tech '76 exhibition, held for the first time last month.

"Collaboration would enable each side to exploit the other's know-how as well as gain greater awareness of what is needed and what is available", Dr Lehmann pointed out.

He added that academics should not be expected to serve a dual role as teacher and technologist. These tasks were both full-time jobs. It was one thing to make slide transparencies and quite another to make good-quality film because of the time, staff, equipment and research needed.

Manufacturers, he pointed out, could produce an educational software for 80 per cent of users and the remainder could always adapt the material to their own individual needs.

This was a message likely to appeal to most of the 90 exhibitors assembled at "Ed Tech '76" under the sponsorship of the ICETT, especially as unlike other functions previously mounted in the educational technology field, the exhibition was sponsored by manufacturers and suppliers of equipment services and not by academic institutions.

Speaking about this at the opening of the exhibition, Mr E. C. Bell, chairman of the ICETT, said that it was only during the last few years that the "enormously dedicated" training industry had come to the attention of the education community.

The ICETT is a limited company embracing manufacturers, publishers, producers, distributors, project contractors, merchant banks and systems consultants, all concerned with audio-visual communications and specialized equipment and materials and the techniques of educational and training technology.

Mr Bell added that the training industry had, of course, always existed and grown alongside the development of the British educational system, but post-war improvements in communications technology, including wide applications of audio-visual aids, had provided a stimulus which led to the emergence of educational technology as an industry.

"Further integration and motivation comes as a result of overseas countries wishing to buy our expertise and our need to present a total capability in order to meet strong overseas competition," he said.

This is why in his view "Ed Tech '76" represented a good opportunity to display a shop window which would give an idea of the enormous fund of expertise commercially available to both UK and overseas visitors.

The shop window in this case provided visitors with a vast array of educational software and hardware ranging from posters, slides, filmstrips to audio and audio-visual equipment and to scientific and technical training equipment.

The future of the exhibition, however, has yet to be deliberated by the ICETT some time this month. It has not been decided

whether the exhibition will be a yearly event or should be held every two years.

Mr John Northwood, organizer of the exhibition, said that the event ought to be held every year as an "AV week" both to be of benefit to the industry and to the public.

Exhibitors had not quite decided whether it ought to be a yearly event, but they certainly did not want to lose the friendly change from the "Olympiades" as well as the "Ed Tech '76".

Some exhibitors, however, expressed surprise at being asked to exhibit in a "change from the friendly change from the Olympiades" as well as the "Ed Tech '76".

Others, too, were doubtful about the date chosen for the exhibition and would have preferred it to be held some time later or at Christmas for instance.

Indeed some felt that the date was too general and that the exhibition was too much like a "show" or a "fair" and that it was not really for the people rather than to elites.

Anthropologists and ethnomusicologists have reported on societies in which all members can develop their education in the exclusive sphere of activity, where there are no "artists", but only men and women who also dance, sing, sculpt or paint.

Although such societies clearly differ from our own in technology and the division of labour, they provide evidence that is relevant for the planning of arts policies in modern industrial societies.

Music, for instance, is widely regarded in our society as an art that can be practised only by a limited number of specially talented individuals, and the dominant doctrine is to dispel this negative view.

Thus music is treated as a limited commodity that in future should "reach more people" rather than as the "product" of the "artist" and the "artistic" which are in people by virtue of their being members of the species *homo sapiens*.

"The greater encouragement of talented musicians" may only serve to perpetuate the star system, which in itself restricts creativity and artistic development in society as a whole, and also encourages the mistaken notion that some people are born more musical than others.

Music Labour Party's experts on music ought to be asking, however, is that in the United Kingdom only some members of society appear to be musically talented, whereas in many pre-capitalist societies all members display musical talent, though not necessarily at every period of their lives.

The periodicity of musical activity in some individuals is one of the strongest arguments in favour of the importance of social, rather than genetic, factors in the development of musical capabilities.

And the fact that language ability is biologically-based, but that understanding a language is as important and complex a process as speaking it, should at least open our minds to the possibility that musical capabilities are also innate to the species, rather than peculiar to certain people.

I have studied the sociology of music in a number of African societies over a period of 15 years and have had a particularly good opportunity to observe the development and exercise of capabilities in music and dance during fieldwork among the Venda of Northern Natal.

All normal children danced and sang as successfully as their masters the syntax of their language.

When I was learning their songs, young children's criticisms of my flon to learn, assimilation of the rules governing the transformation of the speech-tone patterns of words into melody, and the ability to create new music in accordance with these rules.

As they grew older and participated in communal dances, I observed that performers who appeared to begin with equal potential improved unequally in proportion to the interest shown in their efforts, and this in turn was gener-

TALKING POINT

A page open to all those who feel they have something to say on topics of interest and concern to those in higher and further education

In search of a democratic policy for music

It is good that the Labour Party has considered the arts sufficiently important to merit a document to be discussed at the party conference later this month designed to lead to "the development of a comprehensive socialist policy".

It is sad, however, that the study group has neither asked radical questions about the nature of "the arts" and their social functions, nor considered the growing body of evidence on the practice and appreciation of the arts in societies where they really belong to the people rather than to elites.

Anthropologists and ethnomusicologists have reported on societies in which all members can develop their education in the exclusive sphere of activity, where there are no "artists", but only men and women who also dance, sing, sculpt or paint.

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We need a concept of failure

From time to time it is recommended that the notion of failure be eliminated from examination results. This can be achieved quite easily, simply by extending the number of grades.

Of course, many of these grades will be quite worthless; there is nothing one can actually do with them. Nevertheless, apparently, they mark one great advance: no one has been called a failure.

The elimination of failure is conceived as a victory against elitism and as a triumph of egalitarianism. As a matter of fact, it is no such thing. On the contrary, it is an instance of condescension, pharisaism and elitism of the worst kind: its perversity being due to the fact that it manifests itself characteristically in those who think themselves free of these vices. But these conclusions have to be argued for.

Surely, it might be said, it is a terrible thing to tell a man that he is a failure. Yes it is, but why should failure to attain certain standards in intellectual disciplines be expressed in this way? Why is it assumed that failure in this context means failure as a person?

Intellectual interests are interests of one kind only and their influence on people's lives is generally overestimated. It might be possible, and, indeed, is possible, to convey to someone that he has not attained a required academic standard without making him feel worthless as a result.

The possibility of doing so depends on the fact that he is not worthless as a result. There is far

more to life and to human beings than intellectual matters. I do not say that other interests are necessarily better or worse, but they are different. Fulfilment does not answer a single paradigm.

Why, then, do people want to eliminate the term "failure"? Is it not because they are giving it a grossly exaggerated status in their attitudes to people? It may even be that it is those who want to eliminate failure in the name of egalitarianism who do feel that something really terrible has happened to people if they fail, hence the need to cover it up. Here is an unrecognized elitism of the worst sort.

These attitudes may also involve pharisaism. The purveyors of it think that they are not as other men are. I do not mean that these words are actually spoken or thought. When they are a true description of the state of a man's soul, they seldom are.

Implicit in the desire to eliminate failure is the pharisaical distinction between those who have made it and those who have not, hence the need for the crumbs from the table. Finally, the attempt to eliminate failure may involve a condescension to those people aren't up to hearing that they have not achieved a certain standard. They must be protected from this, so all men go said to have passed, but some have passed better than others. Where have we heard that before? In this way language is debased and misused, vehicle of dishonesty and deception.

D. Z. Phillips

The author is professor of philosophy at University College, Swansea.

When decision-making is the key

The polytechnics, it seems, wish to imitate the universities as much and as soon as possible. They may even succeed, if success means equating in to a new third division, but I would call that failure. For they would have missed an opportunity to become equal by becoming different.

Establishing that difference means finding an identity. The science and technology faculties of polytechnics, I suggest, might find this identity by concentrating very squarely on applied science; but on applied science redefined so that a polytechnic education would, by definition, be taken to include an education in the social context in which the students' expertise will be applied.

If the polytechnics have any sort of identity at present it relates to their concentration on the "applied" end of the education spectrum. Where this is simply interpreted as "industrial training", we are clearly abandoning the role of education as a progressive force.

There is a further reason, however, why the polytechnics' clinging to the technical skills which industry requires cannot rescue the polytechnics from their identity crisis, namely that it has already been done.

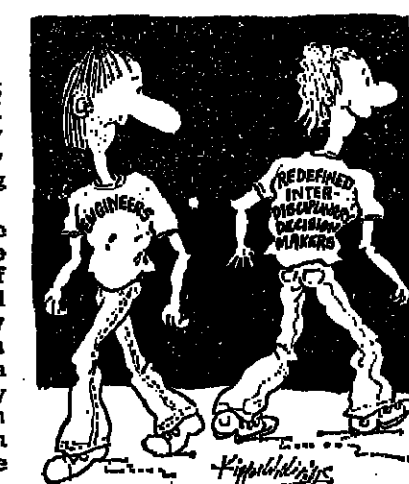
I am not persuaded that the applied science departments of polytechnics can, at present, offer a student anything that he or she could not obtain from most applied science departments at most universities. And from the level of application it is clear that students are not persuaded either.

As higher education expands, and as social problems are increasingly seen to strain the fabric of disciplinary analysis, we have started to move away from a model of education solely based on the extension of discipline-based knowledge.

One of our responses has been concerned with the establishment of "interdisciplinary" research and teaching programmes. To promote these courses, we argue that a monodisciplinary education is not compatible with a true problem-

orientation. In terms of the individual as problem solver, this is doubtless true and we will continue to press for the extension of the type of interdisciplinary undergraduate courses typified by the general studies in science course at Manchester, or our own social and physical sciences course at Newcastle Polytechnic.

We believe that graduates of such courses will have a valuable individual over-view, the skills to play



a coordinating role in interdisciplinary activity, and so an important contribution to make to social and industrial life.

It is nevertheless true that the problem-solver in most of the real situations in which decisions are made is neither the individual nor the specially coordinated interdisciplinary group. Decisions are made by wider groups, more diffuse networks of individuals associated by the structures of the corporation or of political micro- or macro-systems.

Within such structures there are specialists/experts wielding disciplinary skills; and unless we are to assume that the epistemological foundations of knowledge are to be shattered and rebuilt in some majestic synthesis, these experts and the disciplinary frameworks that sustain them will always be with us, for we will always need them.

While such skills are purveyed in a purely instrumental fashion, the structures of the decision-making process will dominate the nature of the decisions reached. Once specialists are freed from the shackles of this instrumentalism and come to recognize the functions which their expertise can be made to serve, they can freely play their part in decision-making.

Once they recognize that their separate volumes of evidence are ultimately synthesized not according to some rational ideal but according to the subtle interplay of political purposes and persuasion, they can learn to apply their skills not as instruments but as whole human beings.

The powers of technocracy (and the authoritarianism which stems from it) are built on a fragile myth. Those who so vehemently indict

technocracy fail to recognize that their enemy has no clothes; the pseudo-rationality of Roskill crumbled in the face of expertise organized in an overtly political context.

Wider access to influence such as this is severely limited by access to expertise, although this is not to claim that such influence will be readily gained nor that the power wielded by knowledge will alone suffice to claim it.

But while experts are taught that their skills are neutral tools, they will happily rent them to head-quarters; once they realize that they are not a plurality of interests and values can be served and democracy can begin to cope with an advanced industrial society.

By emphasizing the political nature of technical decision-making, I am speaking not of class politics nor of party politics (although I reserve my right, and that of anybody else, to do this). I am speaking simply of the integrity of a society which determines policy making in the boardroom of the British Steel Corporation, the shopfloor of Ford or in the offices of Government.

I am talking, if you wish, simply about a better decision-making, about avoiding the technical fiasco (for example) another Concorde fiasco by ensuring that the voices which influence decision makers are not heard from (any) one side but from all those groups in society who are prepared to make their own appraisal in terms of their own interests, or the interests of those that they serve or represent. Such an argument is, I trust, compatible with anybody's view of democracy.

By redefining applied science to incorporate a recognition of the social context in which science is applied, and by associating it clearly with social goals and with the belief that it can contribute to the achievement of these goals, the polytechnics would help to reestablish the credibility of science in the minds of the young and succeed in attracting into science and technology (two their courses) a needed complement of able and concerned students.

By redefining applied science in this way the polytechnics can move away from an education based on the university model of disciplinary puzzle-solving, and also away from a narrow and mistaken technocratic base, to establish for themselves an identity and sense of purpose which will put them in the vanguard of education—which is where they should demand to be.

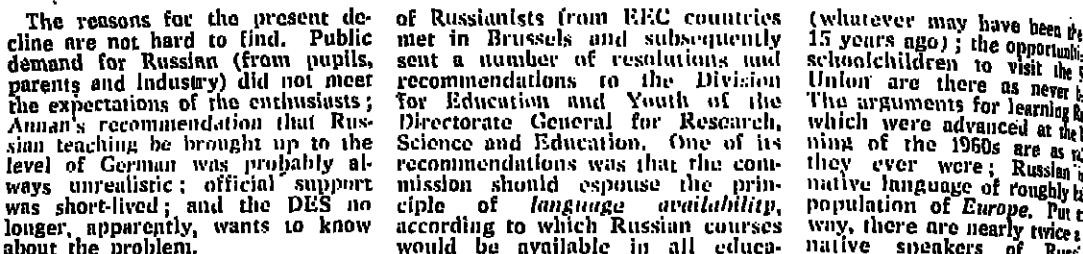
Clive Morphet

The author is a member of the science and society group at Newcastle upon Tyne Polytechnic.

هكذا في الأصل

Most important of all, perhaps, was the complex of factors which included the conviction that Russian was a subject of the future which no self-respecting university should be without; the promise of a vastly increased supply of candidates from the Soviet Union; and the fact that recommendations had been carried out would have reached parity with German by the mid-1970s); the thaw in East-West relations and the hope of increased trade; gradually improved facilities for travel to the Soviet Union; and the expansion of British universities most of which offered honours Russian courses.

The supply of candidates from the schools increased, and more than replaced the supply of under-



by universities has tended to undermine rather than help the position of schools which have been outside this circle from which it is difficult to find an exit without all-round cooperation.

It is sometimes said that the recent decline of interest in Russian in the schools was intensified by Britain's entry into the EEC, and it is perhaps worth noting in this connection that the problem outlined above are not unique to Britain. In May 1974, a conference

It seemed worth dwelling a little on the gloomy as well as the bright side of the picture in the hope that it might help to ensure that the gains of the 1960s are not irretrievably lost and to lend weight to the efforts of those teachers and modern languages at all levels of education who are at present engaging in consultations nationally and locally to attempt to establish a common policy.

There have in Britain a pool of well-qualified teachers of Russian

the probable long-term effect of circumscribing even further average educational standards of foreign culture; before one makes any reference to current Soviet contributions to science, technology, engineering, the natural sciences; or to the potential for trade and world peace.

Malcolm

Dr James works in the Department of Slavonic Studies at the University of London.

Turning to the specific roles that "junior colleges" might serve, it is legitimate if not inevitable to question whether the claims made are as ambitious as they are modest. On the one hand, the focus on the ambitious in terms of objectively assessed capacity is too modest in terms of society's current need. The particular point of development achieved by many colleges that might be involved in new roles is the post-secondary stage of education, since within the past 10 years colleges of education entry standards have risen to the point where even the best students, after completing their university courses, start and accomplish their postgraduate studies with little or no preparation.

Whatever the precise nature of the roles that might be assumed by, or the precise nature of the subjects and levels of study offered within, the framework of colleges formerly concerned entirely with teacher training, there appears to be no doubt that the roles could increasingly be assumed by colleges as the long-established American junior/community colleges and the more recently established Australian colleges of advanced education develop, and they would need in many cases to develop, new or enter new associations with

The purpose of the colleges include:

- (a) Training in vocational skills and related instruction to qualify the student for beginning employment or for advancement in his occupation.
- (b) The first two years of a four-year college or university programme.
- (c) General education which will enrich the life of the student and

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1. The first part of the document is a list of names and titles, including "The Hon. Mr. Justice" and "The Hon. Mr. Justice".



NORTH AMERICAN NEWS

MICHAEL BINYON reports
from Washington

The Times Higher Education Supplement (London)

Tel. (202) 838 6785

Room 541
National Press Building
Washington D.C.New financial warning
light for campuses

Half America's colleges and universities are in financial difficulty and 86 per cent of all private colleges appear to be struggling to make ends meet, according to a massive new survey.

An economic analysis of 2,163 institutions—two-thirds of all those in the United States—showed that earlier diagnoses of financial health were far too optimistic. Instead, many campuses, including some large state universities and elite institutions granting advanced degrees, are operating at a deficit and may well not survive. Only the two-year community colleges were still doing fairly well.

The survey, in this month's *Change* magazine, is the most ambitious ever undertaken and was prepared by the New Jersey Commission on Financing Post-Secondary Education on data from 1972 to 1974.

It found religiously affiliated institutions, especially Catholic colleges, were particularly vulnerable. Single-sex colleges and those with fewer than 1,000 students, predominantly black institutions and those located in New England were also all in an unhealthy state.

Institutions were divided into two categories: healthy, relatively healthy, neutral, relatively unhealthy (which might be turned around by good management) and unhealthy (where long-term survival was in doubt without some major external intervention).

Looking at all the institutions, 25 per cent were in the healthiest category, while 44 per cent were in the top two. But over a third of all those surveyed were "relatively unhealthy" and 14 per cent (311 colleges) were in the bottom category.

'English consultants' face growing demand

Departments of English that feel they have run out of ideas or that want advice on how to set up a centre to teach composition can now call in a newly formed academic consultancy group set up by the College English Association.

For a fixed fee a university teacher of English will visit the department, listen to the outline of what it wants and then suggest changes and improvements. He usually spends a day and half at the host institution, which pays him \$100 plus his expenses.

This academic equivalent of management consultancy was set up by the College English Association, which has offices in New York, New Jersey, and Ohio. It covers four general fields:

Rockefeller offers 'humanistic' awards

The Rockefeller Foundation has invited applicants for a number of individual grants to support the production of works of "humanistic scholarship" intended to illuminate and assess the values of contemporary civilization.

This is the third year of these awards, which range in value from \$10,000 to \$15,000. The focus is meant to be on "the contemporary experience and its dilemmas as well as on long-range, perennial, and universal human concerns".

of the subject; curriculum research; innovative teaching methods; creative technology in class and writing centres.

By the largest number of requests have come for advice on how to run writing centres for the growing number of students unable to write correct English. Several universities have already started successful remedial programmes, and others have made intensive use of writing "laboratories".

The College English Association is a top academic body established in the 1930s, which keeps in close contact with developments in the field of English in all institutions. It has been heavily involved in the debate over what to do about declining standards of literacy among students.

Habitat materials stay in Canada

Assuming the United Nations general assembly approves, all the time and documents used at the recent habitat conference in Vancouver will be donated to the University of British Columbia.

The material—about 10,000 documents and 233 audio-visual presentations worth many millions of dollars—will form the basis of a human settlements resources centre.

Both Ottawa and the government of British Columbia have promised the university money for the centre, which could be one of the most comprehensive in the world.

Pennsylvania emphasizes 2-year sector

Pennsylvania wants more community colleges, and has just changed the law making it easier for local communities to sponsor them. The state board of education hopes that at least 10 more colleges, each serving the equivalent of 3,000 full-time students, can be set up—especially in rural areas which have no college within easy reach.

In Pennsylvania, as in almost every state, community colleges have been a fast growing sector of higher education. The great boom was in the late 60s, when two-year colleges were established in most urban centres. Since then, however, the movement has stalled as funds have become tighter, and it is unlikely that any more fully-fledged colleges will now be built.

Instead, the board of education is trying to encourage communities to set up "colleges without walls"—colleges that have no buildings of their own but which rent classrooms in existing technical colleges, schools or even from local industry. This is not only cheaper, but much more flexible as space can fluctuate according to demand.

The board wants these colleges to be just what their name implies—places sponsored, and governed by local communities, and running whatever courses there is a local need for. The laws that have been changed now make it easier for colleges to take on part-time teachers who need not even have teaching credentials as long as they have been certified as competent by a governing board.

Any community having the power to raise taxes can now set up a college. All it has to do is to appoint a board of trustees and a treasurer, and submit its plans to the state board of education to be approved by quarterly financial statements. The state board will pay half the yearly capital costs, including rents for leased buildings, plus a proportion of the operating costs, calculated according to the number of students enrolled.

At present Pennsylvania has 14 community colleges. About half their students are part-time, many of them older people returning for extra training or qualifications. The average student age has been steadily rising, and is now 28.

Iran calls off navy plan

A plan to concentrate up to 1,000 Iranian students in a naval training school at Old Dominion University in Norfolk Virginia (THESE, March 5) has been scrapped. The naval students will continue to be dispersed around the United States.

The Iranian Embassy has confirmed that Tehran has decided for a prototype naval academy at Old Dominion which could be transferred to Iran after eight years.

The Iranian educational attaché in Washington said it had been decided that there would be greater collective benefits in naval students and influences around the world. Old Dominion, which offered to stand the academy on the under-lying new buildings that needed to be put up, has not been officially informed of the decision. A spokesman said no reply had been given to the offer made last February, and the university had been waiting.

If the plan had gone ahead, it would have brought together the greatest concentration of students of one nationality anywhere in the United States. There are altogether 17,000 Iranian students in America—the largest contingent of any foreign country.

Single-sex colleges 'be' for PhD results

A new analysis of which institutions have produced the most number of women PhDs in the past 50 years, both in absolute numbers and as a percentage of their student body, shows some surprising results. In general it found that it was not the large state universities that have proportionately produced the greatest crop of women doctorates, but the small private all-women's colleges.

Since the First World War nine institutions in particular have scored consistently high in success in the range of PhDs awarded and the percentage of women undergraduates going on to doctorates. These are: Barnard College, Bryn Mawr, Mount Holyoke, Radcliffe, Smith, Vassar and Wellesley—all private women's colleges; and the universities of Chicago and Cornell, both private mixed institutions.

The survey, published in the magazine *Science*, also looked at the equivalent results for men, and found that again it was small private all-male colleges that sent the greatest number of their graduates on to further PhD study.

In four decades between 1920 and 1970 (the decade 1940 to 1950 is omitted because statistics were not collected during the war), institutions with the highest proportion of male students going on to PhDs were (in order): Reed College (29 per cent), California Institute of Technology (28 per cent), Harvard College (26), Swarthmore College (21), the University of Chicago (16), Harvard College (16), Carleton College (17), Pomona College (15) and Massachusetts Institute of Technology (14).

The survey suggests: "A favourable climate for women students capable of being in an environment where there are many other women seriously involved in a variety of academic pursuits."



University of Chicago: tops for doctorates.

Company aid to arts soars

Contributions by large American companies to culture and the arts are rising faster than for any other philanthropic cause, according to a survey by the Conference Board, a respected independent financial study group.

A study of 799 corporations, which between them account for more giving showed that in 1974 92 per cent made donations to culture and art, compared with 79 per cent in 1972. Museums and non-commercial public television were the chief beneficiaries.

The biggest donors were the publishing and stone, clay and glass industries. The third, the oil industry, gave over 10 per cent of its donations to public radio and television.

Overall health and welfare remained the top recipient, getting 35 per cent of the total, down a little from the 1972 level.

Altogether the 799 corporations gave \$438m to philanthropic causes in America in 1974. In addition, 229 firms made donations abroad. The total contribution overseas was \$31,000,000, one company donated \$6,000,000.

Similarly, institutions with a lot of male PhDs were concentrated in a narrow range of academic disciplines.

In terms of absolute numbers, the picture is very different. On this table the large universities do much better than the 10 undergraduate institutions.

Most students went on to PhDs between 1920 and 1970. The top three were: University of Wisconsin, California Berkeley, and the University of Michigan.

For men, the order is: University of Wisconsin, University of Michigan, University of California, Berkeley, University of Minnesota, Massachusetts Institute of Technology, Cornell University.

But, as the survey points out, it does not mean that these institutions have a special productivity.

Two universities, however, stand out as particularly productive: the University of Wisconsin and the University of Michigan. Both have a relatively high percentage of male students going on to PhDs.

Part of its success, however, seems to be due to the university's selection of subjects in which it is active: broad fields (physical and engineering life sciences, sciences, arts and humanities) and high academic standards.

This group, on whom soon fell most of the routine teaching, is comparable to the British lecture grade. Members held permanent appointments, often civil servant status, but did comparatively little research. They had a more independent position vis-à-vis their professor yet were denied any say in departmental or university affairs.

In some universities the former *Hochschullehrer* has disappeared over the many years of his appointment, yet eventually almost certain to obtain a professorial chair, was upgraded to *Assistenten* professor (comparable to the American Assistant Professor). The emancipated *Assistenten* was given greater freedom: apart from the *Ordinarius* and the lecturers on the verge of an appointment to a chair, he alone was entitled to teach and research independently, although he had only limited tenure.

Since a great deal of the work of a university revolved round these non-professional groups they, like the students, demanded under the banner of "more democracy and greater transparency" of decision-making processes.

Länder recognized these demands, altered their university laws and evolved different, although always rigid and complicated models of decision-making, allocating votes in different proportions to the various groups.

Thus, under the 1971 Lower Saxony Law, the votes in most decisions of the boards of common schools of study were broken down as follows: 8:4:4:2, the eight being those of the *Hochschullehrer*. The latter, therefore, were going to junior staff, students, and non-academic staff. In certain cases the *Hochschullehrer* had half of the votes, but never more. In other Länder they were only slightly better off.

It was vital in an atmosphere of distrust and military, where many representatives were nominated by the government in an "altruistic" German university—to have a description of who belonged to the *Hochschullehrer* group.

It is hardly surprising to find that including, apart from the old-type professor, some of the new category of staff, even the *Assistenten*.

The issue was additionally complicated by the growing number of the widespread amalgamation of colleges to, or with, universities. There was a natural tendency to stick to a unified staff structure in all types of higher education institutions.

Taking a little power from the professors

The enemy of West German university reformers—and this includes student protesters, "progressive" staff, politicians and administrators—was until quite recently precisely the institution that they were so determined to destroy: the staff hierarchy and the introduction of co-determination.

Accordingly, the section of the *Hochschulrahmengesetz*, dealing with this aspect, was one of the most thoroughly discussed and also one of the most substantially modified in the chequered history of the Act. The chief merit of the final version is that it does away (or will do so by January 1979 when the *Länder* will have had to amend their existing legislation) with the multiplicity of posts, grades and nomenclatures, often with overlapping functions, and rights and salaries that have come into existence since the first phase of university expansion in the late 1950s and 1960s.

To cope with the many additional students *ad hoc* solutions had to be found without, initially, dismantling the old university and its strict staff hierarchy. A totally new category of academic staff, collectively called *Mittelbau*, grew up in between the all-powerful *Ordinarius* (full professor) and his minion, the old-type *Assistent*.

The *Hochschullehrer* (or new-type professors, ranging from tenured lecturer to full professor) was to be the expectation of becoming a professor) the *wissenschaftliche und künstlerische Mitarbeiter* (a kind of auxiliary teaching staff, fulfilling essentially a service function and not engaged in research). The *Lehrkräfte für besondere Aufgaben* (teachers fulfilling special, primarily practical duties, like foreign language assistants or needwork teachers).

The *Hochschullehrer* (as defined under the Act) enjoys certain rights and has certain duties. His most important rights are the constitutional guaranteed freedom of research and the freedom of teaching. However, instead of the absolute freedom of the old-style professor to lecture on whatever subject he liked the new-type professor has to fit in with an overall course programme. Since the requirements of many of the degree examinations are prescribed by the Government, his independence may, in fact, be quite substantially restricted.

The *Hochschullehrer* has the duty to teach in all areas of his subject, regardless of whether they are more research or more practice-oriented, whether they are long or short. The Act in its final form thus deliberately makes no distinction between college-type and university-type courses.

This attitude is carried over into the description of the qualifications needed by a candidate to be considered for a *Hochschullehrer* appointment: apart from a university degree and normally, a doctorate, either further research or further professional, practical experience are stipulated. The Act has two clauses specifically devoted to the manner of transferring existing appointments to the new grades.

To a certain extent dissatisfaction among existing professors with the Act is understandable and justified, although their own personal rights are being preserved. They feel that their own status, which is founded on long training and high academic achievement, is being deliberately lowered to accommodate teachers with quite different qualifications.

The professors are also right in pointing out the danger of university teachers becoming even more rigidly enmeshed in the civil service structure. The basic conditions of service as laid down in the Act without any doubt permit the state to exercise a much greater hold over university teachers than hitherto.

On the other hand, the professional privileges used to be enjoyed by a small, exclusive group of men and women only. Now that universities have been increased, so substantially and a large number of additional chairs have been created, it is only natural that some of the special features associated with the old-type professors should be reversed.

The new-style professors, too, now again have the absolute majority in decisions concerning teaching, research and professional appointments. If the majority of the committee holds a different opinion from the majority of the professors, it may forward an additional separate recommendation to fill a vacant chair: an illuminating example of the compromises and in consequence rather ineffectively (or, in certain instances, vaguely) nature of many sections of the Act.

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Republic of Ireland

Third-level shakeup running out of time

from John Horgan

DUBLIN

Department of Education draftsmen involved in the preparation of legislation embodying a wide-ranging series of Government decisions on the future of higher education in the Republic face what is certain to be an increasingly tight race against time if the measures are to reach the statute books within the lifetime of the present administration.

The Government decisions on higher education were in fact announced as long ago as December 1974 (*TIES*, December 27, 1974). One of the reasons why they have not been implemented is that the Government does not tie itself to a tight parliamentary timetable, as in Britain; they have been introduced comparatively early in a Parliament's lifetime to remain on its order paper, uncompleted, at the end of the Government's term of office.

Another, more pertinent reason, is that the decisions were published in some haste, apparently to avoid premature press leaks, and were not linked to any White Paper or pre-legislative document indicating the details of what promised to be a very complicated scheme—the unification of all third-level educational institutions under the general umbrella of the universities.

Finally, there is the fact that since their publication, the Coalition Government has tended to revert to a way of doing things popular under the previous administration—the setting up of numerous committees and arrangements on an *ad hoc* basis, leaving the legislation merely to put the finishing touch to the overall structure.

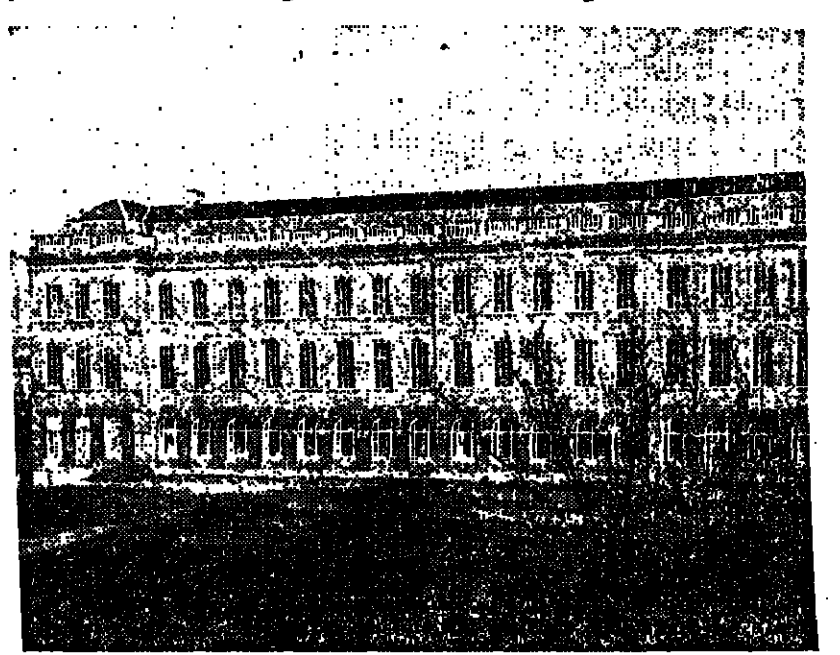
In this way, a great deal of the groundwork for the legislation has already been laid, even though it was initially greeted with great hostility. The Fianna Fail Opposition Party policy is still firmly committed to a strengthening of the technological sector prior to any ending of the binary

system, as is the Union of Students in Ireland. Some members of the Labour Party, the junior partner in the Coalition, would probably prefer a similar approach. In the meantime, however, many of the decisions, including some of the more controversial ones, have already been given effective force.

The National Council for Educational Awards has been reconstituted, shorn of its power to validate degree-level work in addition to diploma and certificate qualifications, and also of some of its more prominent members who had been appointed to the original council by the previous Government. In effect, the broad outlines of the policy have now been clearly established. The details are what look like presenting the problems. The major one is that of creating an appropriate institutional arrangement to

oversee collaboration between the two intensely competitive university institutions in Dublin—University College and Trinity College—while not detracting from what the colleges see as their essential degree of independence. Science, engineering and medicine are the key faculties here.

Last but not least there is the sheer task of drafting a Bill or Bills which will not only replace the 1908 Universities Act—itsself a highly complex and controversial piece of legislation—but which will plug all the gaps in the statutory framework of higher education which have been opened up by the creation of so many *ad hoc* institutions in the past four years. The prospect must be a draftsman's nightmare, and the Department of Education, which has not drafted a major Bill for more than 40 years, must be feeling the strain.



Trinity College, Dublin.

Finland

New-look doctorate to embrace professional and academic

from Mike Duckenfield

STOCKHOLM

The abolition of the intermediate licentiate qualification and the introduction of a revised doctor's degree requiring four years' full-time study have been proposed by an Education Ministry working party set up to look into the future of postgraduate training.

The group, led by Mr Mikko Niemi, director of the ministry's division for higher education and research, has rejected earlier suggestions to set up two branches of postgraduate study, one vocational oriented and based on the licentiate, the other academic and centred on the doctorate, in favour of a single integrated qualification.

The revised degree would be designed to meet both scientific and professional aims and be based on planned programmes of study incorporating general theoretical and special studies as well as research.

More attention would be given to the social relevance of students' projects, which should fit into larger inter-disciplinary research programmes.

The group proposed that the new degree should be made available in the early 1980s. Mr Niemi, Vice-Chancellor, Education Minister, is now considering the report.

Law schools win partial reprieve

PARIS

Following recent anxiety over a possible break-up of the law faculty at Nanterre (Paris 10), after parallel strikes earlier this year, Mme Alice Saunier-Salèr, Secretary of State for Universities, has now said that the faculty will be allowed to continue functioning.

Lecturers wishing to move from Nanterre will be able to transfer to the new law school at Paris 5 providing they continue to give classes at Paris 10 for another two years.

Spain

First rector elected since Franco

from William Ghislett

MADRID

Spain's Minister of Education, Sr Aurelio Menéndez, has confirmed the nomination of Professor Angel Vian as rector of Madrid's Complutense University, the first person to be elected to the post 37 years. Under the late General Franco such posts were political appointments.

Professor Vian was elected rector in June. He was put forward by most faculties and is regarded as a democrat. He belongs to no particular political party.

In an interview Professor Vian said his first priority when the university starts in October will be to try to improve the administration and quality of teaching. He also wanted to improve conditions for scientific investigations.

Most teaching at the university is done by no more than 10 professors or contract teachers who work long hours for small salaries. Thus one of the first problems he will undoubtedly face will be the round of wage bargaining.

Professor Vian drew wide support because he said he considerably eased the tense atmosphere in the universities by allowing greater freedom of expression and assembly and withdrawing the police from permanent guard on campuses. This exercise of greater tolerance led the large block of right wing MPs in the Cortés to label universities "Marxist bunkers".

Professor Vian said if he had been rector at the time of that "insult" he would have taken action.



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Further or higher?

If the 1960s were the decade of higher education, in particular the universities, the 1980s are likely to see public attention—and money—switch to the rather clumsily named tertiary sector, the education of 16 to 19-year-olds and of adults who for a variety of reasons cannot receive the benefits of formal higher education.

Already this change of direction has become a cliché, repeated in speeches by successive Secretaries of State (although cynical observers may prefer to suspend judgment until the money matches the good intentions). There was also some evidence at the meeting of the British Association which ended two days ago that academics too are beginning to recognize that the emphasis is likely to change in this way.

Professor Alec Ross, the president of the BA's education section, made this likely shift of priority from the "higher" education of 19 to 21-year-olds to the "further" education of the 16-plus age group the theme of his address. And the BA meeting took place appropriately at Lancaster, a university that has already shown its sensitivity to the shifting climate by its decision to establish an Institute for Research and Development in Post Compulsory Education.

However, such sensitivity is still rare away from the speculative atmosphere of BA meetings and among the ranks of committed educationalists. Most teachers in universities—with the exception of the former colleges of advanced technology—have never really known of the world of further education. An increasing number of polytechnic academic staff are in a similar position and those who do know about further education are learning to forget. Many in colleges of education also feel that the educational values of further education are alien and even hostile to those which they respect.

This has been revealed in the academic response of the colleges to their administrative reorganization in the past three years. Instead of looking forward to the 1980s, too many colleges looked back with nostalgia to the 1960s. Their traditional modes and values, derived from the experience and the values of the new universities which seemed so congenial and cosy, modified by the fact that they were usually obliged—against their will and sometimes against sense—to amalgamate with polytechnics.

For a few colleges, especially the ones strong enough academically to maintain their independence, this was a viable course but not for the majority. Too often the result has been demoralizing disorder. Forced to compete with much stronger institutions for a not over-generous supply of students, many colleges are now obliged to offer courses of shaky academic standard and unreliable enrolment. At the same time the route into higher education for the school leaver with O rather than A levels once provided by teacher training, has been choked off.

There are other ways, however, in which the tertiary sector can become a reality. Instead of reflecting palely the light of university undergraduate education, they could have let their own light suffice further education. As things stand, many of the newly formed colleges and institutes of higher education will find it hard to attract a sufficient quantity of quality degree students (outside teacher education). The best that may be hoped for is a precarious life on the edge of traditional higher education. For some there will be no life at all.

There are at least four reasons why the tertiary sector will become increasingly important in the next 10 years. The first is clear from the predicament of the colleges. The number of sixth formers hammering on the gates of higher education is no longer sufficient to sustain both the expansion of existing institutions and the creation of new ones.

The demand from school leavers for higher education of a traditional variety—full-time, degree level, often residential—is only slight at present. Even if it were still buoyant, it is doubtful whether the open-ended expansion of this style of higher education would be in the public interest.

The second reason is the corollary of the first. There is considerable demand from earlier school leavers to continue their education in a less formal or elevated manner and a pressing social need for them to do so. Yet most further education colleges remain somewhat narrow, vocationally oriented institutions, marked contrast with the much more liberal educational atmosphere in American community colleges. In the next 10 years further education will have to be liberalized in the same way. Some progress has already been made in this direction by the new Technician and Business Education Councils. Much more could be made if Diploma of Higher Education courses were more closely integrated with these new TEC and BEC courses rather than being seen always in relation to full degrees.

It makes no sense at all to have "vocational" two-year, sub-degree courses validated by TEC and BEC, and "liberal education" courses of the same standard and length validated by the Council for National Academic Awards.

The third reason is that in the future many more students will come to higher education after an interval in a tertiary college rather than straight from a school. This is already happening. Many 15-year-olds are voting with their feet and leaving school to take A levels in further education. The comprehensive reorganization of secondary education links that used to exist between grammar school sixth form and higher education will be weakened or broken.

The fourth reason is the most decisive of all. It is that the "higher" education of 18 to 21-year-olds with academic ability is already well provided for. The promise of Robbins has been more than kept. But the provision of "further" education for 16 to 19-year-olds is far from adequate. The promise of day release for all young workers made a generation ago has been forgotten.

However, it would be parochial selfishness for universities and polytechnics to regard the enhancement of the tertiary sector as antagonistic to their interests. The traditional school sixth form will be the main sufferer from such a short-sightedness. It would also be short-sighted because new emphasis on the education of sub-degree students will be accompanied by weakening of the present distinction between higher and further education. This will allow universities to concentrate more on their traditional tasks and a more sensible arrangement to be worked out between the polytechnics and the growing number of colleges of higher education.

At later stage consortia of higher education institutions may be able to establish a wide range of appropriate degrees and courses, concentrated in a university or polytechnic which would resolve students' from a number of colleges offering some degree but mainly sub-degree courses.

A necessary precondition of this enhancement of the tertiary sector is a new identity. Further education, a term description resident of the world of the "tech" is no longer appropriate. Tertiary is too complicated and too wide. It includes school sixth forms, anyway. A necessary precondition of this enhancement of the tertiary sector is a new identity. Further education, a term description resident of the world of the "tech" is no longer appropriate. Tertiary is too complicated and too wide. It includes school sixth forms, anyway. A necessary precondition of this enhancement of the tertiary sector is a new identity. Further education, a term description resident of the world of the "tech" is no longer appropriate. Tertiary is too complicated and too wide. It includes school sixth forms, anyway.

LETTERS TO THE EDITOR

Advertising for students

from Richard Bentley
Sir—In questioning whether or not advertising in national newspapers is a more effective method of recruiting students than "the slower and less glamorous task of building up close links with secondary schools" your leader writer (*THES*, September 3) appears to make the assumption that all those entering polytechnics enter directly from secondary schools into higher education.

A survey of the Polytechnic of North London's intake in 1975 showed that only 21 per cent of new students left school in the year prior to joining the college, 22 per cent within the previous three years and 57 per cent over three years ago.

You could argue that all those new students attending school at some point and would have heard about polytechnics if close links had been established. However, both they and the institutions will probably have changed in the intervening years and in any case many of the new breed of polytechnics were still in their infancy three or four years ago.

However, a more important point is that the polytechnics still have to combat a widespread lack of knowledge and understanding about their role, not only amongst their colleagues in education, but also amongst the general public. The latter cannot be reached by concentrating on building up links with schools.

Of course, the primary objective of the advertisements which are currently appearing in newspapers is to attract new applicants. However, in the long term they must help to inform a wider audience of the opportunities offered by polytechnics. There are those of us who argue that the Committee of Directors of Polytechnics should also use a different style of advertising as

part of its long-term corporate campaign to combat misconceptions about polytechnics. I was surprised to see you using the word "vulgar" in recruiting "a little vulgar" in "recruitment" (I believe your word was "solicit"). I believe your word was "solicit". I believe your word was "solicit".

I can only speak of my own college but I fear that my inaccuracies may be beyond it. My college is not a "vulgar" one. My college is not a "vulgar" one. My college is not a "vulgar" one.

Yours faithfully,
RICHARD BENTLEY,
Communications Officer,
The Polytechnic of North London,
London N7 8DB.

from E. Hughes
Sir—For the thousands of school-leavers still uncertain which courses to pursue, the educational press in the weeks following A level results is critically important. Third information therefore would be more welcome than the maelstrom of your front page report of last minute applications (*THES*, August 27).

I can only speak of my own college but I fear that my inaccuracies may be beyond it. My college is not a "vulgar" one. My college is not a "vulgar" one. My college is not a "vulgar" one.

Yours faithfully,
E. HUGHES,
Department of Languages and
Cultures,
Sunderland Polytechnic.

International studies

from Professor C. A. W. Manning
Sir—The picture presented by Jeremy Clift (*THES*, August 20) in his piece about international politics and a degree of understanding, with its mention of me, invites, I feel, qualification on at least one point.

Even a quite careful reader might, I suggest, be excused for deducing that "the institution of international relations, in conjunction with international law, as a special subject within the degree course" had followed upon my appointment to the London chair.

In reality, when in 1930 I moved from Oxford to London, the department at LSE was already a going concern, its foundation truly laid by a trio of outstanding scholars, all products of that university on the Cam, which even today has yet, I believe, to make place, at undergraduate level, for the discipline that they helped in placing so "firmly on the academic map".

It would be wrong to understate the work then accomplished by S. H. Bailey, whose death in 1938 was a calamity; of the boys, Professor Emeritus Lucy Malet; and of my friend and dynamic predecessor, Philip Noel-Baker, who directed their endeavours. I was the beneficiary, not the architect, of a curious arrangement which, though improved upon in detail since, have in their broad essentials stood the test of time.

Mr Clift will I trust forgive me if at the same time correct an error perhaps not initially his—that, flagging member in Geneva, I had tarried to the ILO, rather than the League. For it was to the ILO, rather than the League, that I owed my first post-war employment. But the offer I now was not such as anyone could have blamed me for wishing to forgo. The note on my obituary by the late Albert Thomas signified to me the end of my career.

as flattering as it was friendly. I am proud to have served, however briefly, under him.

Yours faithfully,
A. W. MANNING,
Newtown Road,
London W2 5LT

Drama degrees

from Donald H. Roy
Sir—I must protest at Sue Reid's article about drama training (*THES*, July 30) which is guilty of sweeping, uninformed oversimplification.

The sub-editorial description of the forthcoming course at Durham College and the Middlesex Polytechnic as "Britain's first drama degree" is of course a piece of pious nonsense, and your correspondent's dismissal of the eight university drama departments as subject to "an academic his travels really by conjuring up the spectre of gravely theorising and immersed in textual exegesis and largely insensitive or even hostile to the value of practical work. The truth is quite other."

At Hull, for instance, the degree syllabus incorporates compulsory or optional courses in acting, dance, directing, front-of-house management, plus practical projects on individual genres, playrights or styles of presentation, all of which are directly assessable as part of the student's degree performance and may occupy as much as half his timetable hours, to say nothing of the dozen or so public productions mounted by the department in an average academic year.

The real distinction that Miss Reid should have drawn lies between courses of explicitly vocational training, such as are provided by drama schools on the one hand and, on the other, degree courses which are aimed at developing the student's understanding of drama through formal lectures and tutorials, combined with practical classwork, the two being regarded as equally "academic".

It is not, nor should it be, the primary function of university drama departments to prepare students for the professions of theatre and it is their concern to make the hand and heart as well as the head in the study of drama and theatre—to stimulate the creative imagination.

Yours faithfully,
DONALD H. ROY,
Drama Department, Hull University.

Staff in research

from Dr E. Rudd
Sir—In several places in your issue of 13 August (*THES*, August 13) you have distinguished between teaching and research staff, who do research and teach.

However, several studies (all those for the Robbins Commission) have shown that, while teachers in United Kingdom do some research, it is not their primary function. It is the research staff who do the research and teach.

A more useful distinction would be into those doing research, at one end, and at the other, and various in between. All the evidence the more research-oriented staff, when compared with low research orientation, are doing research, staff at the top of the continuum and low other end.

My argument is that, in the better research staff, the teacher is a research staff, at one end, and at the other, and various in between. All the evidence the more research-oriented staff, when compared with low research orientation, are doing research, staff at the top of the continuum and low other end.

I have given elsewhere evidence for the more able research staff, at one end, and at the other, and various in between. All the evidence the more research-oriented staff, when compared with low research orientation, are doing research, staff at the top of the continuum and low other end.

The squeeze on university and college finances in the past three years has simply exacerbated trends that were anyway inevitable. When North Sea oil begins to flow and the pressure is taken off public expenditure, these trends will continue to apply.

For example, the erosion of the staff/student ratio is likely to proceed. Indeed, a defining characteristic of a mass system is that the intimate and expensive, staffing standards of the past are no longer appropriate. Similarly the present degree of outside interference in the affairs of higher education is unlikely to be a temporary phenomenon.

Of course, there is an alternative analysis of the present condition of higher education in Britain which discounts the use of such grand concepts. It regards the present depression in its fortunes as a hangover after the long party of over-rapid expansion which lasted from the publication of the Robbins report (or even before) to the White Paper *A Framework of Expansion* in 1972.

When the expected improvement in economic performance allows Mr Healey to put away his axe, when the public have forgotten the time when the first place perhaps by the standards of the past are no longer appropriate. Similarly the present degree of outside interference in the affairs of higher education is unlikely to be a temporary phenomenon.

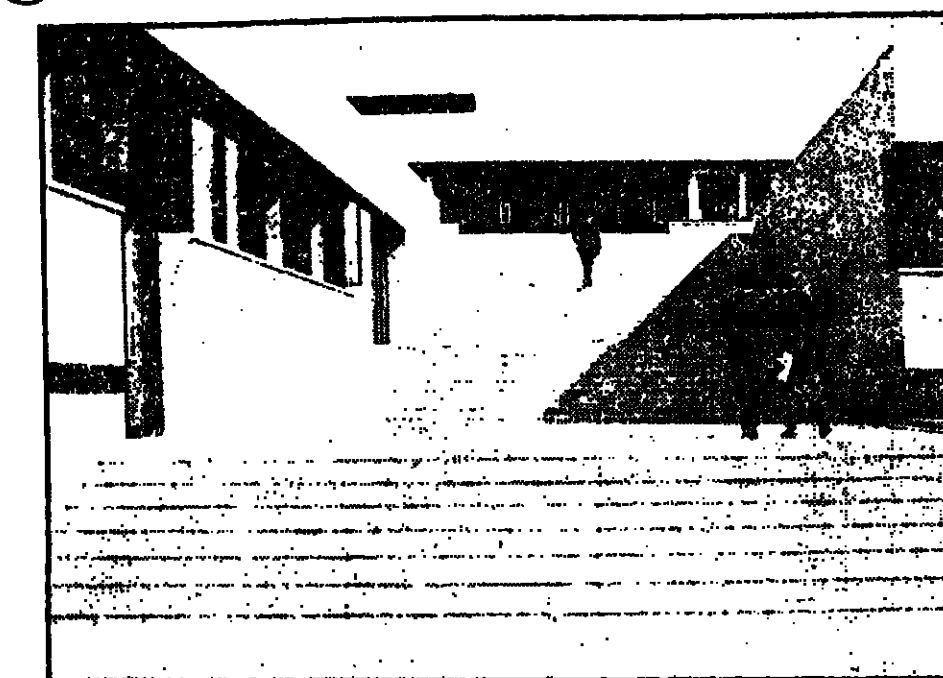
There is some evidence to support this second analysis. One reaction from the universities to the harsher economic climate seems to have been to put the preservation of standards before the extension of opportunity. To a lesser extent this has also been the Government's reaction.

At the beginning of this decade the semi-official target for British numbers at the time was about 600,000. At the time this target was set, it was a target of up to one million students in 1981 was mentioned. Today that projection has been trimmed to just 600,000.

However, on balance the first analysis seems more valid. It provides a fuller account with a more generous perspective on the likely development of higher education in the next generation. There are three main reasons.

First, the most recent information suggests a resurgence of student demand for higher education. Both the Universities Central Council on Admissions (UCCA) and individual polytechnics have reported a marked increase in applications this year. One explanation is that this increase simply reflects the present level of unemployment and buoyant demand from overseas students. But it may be that the pause in the growth of even that demand in recent years is over. The years immediately after Robbins when actual exceeded projected demand may re-establish itself. In any case demographic decline will not hit higher education until the middle 1980s.

No longer gentlemen—not yet effective players



New libraries at Oxford University: "Today the choice is between a rational system of higher education which protects excellence but enhances opportunity, and an irrational system which does neither."

Peter Scott discusses the future prospects for higher and further education in the light of present trends in both supply and demand

Secondly, the system is already too big just to fade into the background. Higher education is no longer in the public or the politician's mind a technical synonym for universities. It is no longer even a binary system divided between public and autonomous sectors.

Particularly since the reorganization of the colleges of education it has become a more highly diverse system—university and public sector, degree and non-degree, polytechnic and monotechnic. Some effective regulation of this diversity to avoid wasteful and possibly destructive competition is inevitable and desirable.

Under present conditions the Government is the only available agent for such regulation. Similarly, the cost of higher education is now too great for it to shun the light of the political arena. The recurrent expenditure of universities is already approaching £600m a year.

Thirdly, experience in other countries, in particular the United States, suggests that Britain will develop in time an even more diverse and accessible system of higher education, although the process may be delayed by economic adversity. This international experience suggests that it is possible to expand higher education along fairly traditional lines until about 15 per cent of the age group is enrolled.

But when this threshold is reached, not only does further expansion in this way become very expensive but it ceases to be so appropriate for the new students coming into the system, for a mixture of academic, social and economic reasons.

Failure to recognize the significance of these important qualitative changes coming over higher education in Britain is likely to lead to potentially ruinous consequences. They include a damaging decline in standards in the top 10 or a dozen universities and an unnecessary restriction of educational opportunity to school-leavers—which at first may appear paradoxical but is in fact entirely logical.

The plain truth is that the present structure of higher education is archaic. It is incapable of developing the ability to level education in spite of its superficial diversity. Indeed, all the conventions of the system are opposed to any such discrimination.

The "gold standard" in degrees, the Houghton principle that university and polytechnic lecturers should be paid equivalent salaries, the strong belief that all institutions should enjoy reasonably equal facilities, all must be re-examined in the light of the changing needs of an expanding system.

To put it bluntly, Oxford, Cambridge, London, Bristol, Manchester, Birmingham, and so on will receive proportionately less and the new institutes of higher education and the weaker polytechnics will receive proportionately more.

But this is not the end of the story. This levelling process will not only weaken the elite institutions: it will also make the peripheral institutions more expensive.

Better pay for academic staff, more generous back-up from non-academic staff, more favourable staff/student ratios, and more lavish facilities—what the Americans would call "academic enrichment"—will raise the cost of providing post-secondary education in these institutions.

The movement towards mass higher education should be accompanied by two important changes in the structure of the system which may at first appear contradictory but are in fact complementary: the reinforcement of the existing elite institutions and the much more rapid extension of educational opportunity.

Of course, there are serious obstacles in the way of creating an elite sector of higher education which cannot be passed over easily. It will be a particularly difficult task in British conditions. In the much more pluralistic system that prevails in the United States such an elite can evolve and can also be modified as the fortunes of individual institutions ebb and flow.

In a much more centralized system such as that in France, the creation and direction of elite institutions like the *grandes écoles* is also a much simpler matter. But British higher education with its increasingly centralized control yet strong tradition of academic and institutional autonomy falls uncomfortably between the two.

Our hearts may prefer American freedom, but our heads must choose French direction as the only feasible way to introduce a greater element of discrimination into the planning of higher education in Britain.

Even in America state governments have shown increasing interest in coordinating their higher education provision, ranging institutions in a hierarchy of function and esteem. However unpalatable it may be, probably the only way to create an elite sector in British higher education for to protect standards in the existing institutions is in a positive sense with forward planning of the system. Too often at present the UGC is left to sort out the minutiae of university policy after the big decisions have been taken elsewhere.

Alongside this strengthening of the Government machinery could a start be made to introduce more discrimination into the planning and control of higher education.

However, this would need to be balanced by a reform of the University Grants Committee. Its membership would have to be widened to include representatives from the previous non-university sector and its role changed.

Such a statutory higher education council would be less concerned with the detailed distribution of money to individual institutions (here the Government would need to be much more directly involved) and more concerned with the overall planning of the system. Too often at present the UGC is left to sort out the minutiae of university policy after the big decisions have been taken elsewhere.

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There is a strong case for the development of a network of local centres of higher education, based partly on adult education institutes partly on colleges of education or further education. The Government might even be encouraged to follow this policy if it had a reasonable guarantee that these institutions would not immediately demand the agreed proportion of senior staff and the right to undertake fundamental research.

Parallel with this expansion of what might be called "general" higher education (though with an appropriately high scientific content) must go an enhancement of advanced education for scientists and technologists and for other skilled professional workers.

While no one would argue for the establishment of a Soviet-style monotechnic institutions, it is important to protect subjects from the fickle winds of student taste. Sadly perhaps, institutions such as Cranfield and the London Business School are the exception not the rule.

These three reforms of the structure of higher education, the enhancement of an elite sector, the more vigorous extension of opportunities for "general education" at an advanced level, and the encouragement of advanced education in science and technology, would correspond more closely to the requirements of prospective students, of the economy, and of society.

Of course, it is much easier to state the general principles that should be taken into account in any reorganization of higher education than to devise the details, and in particular to name the names.

However, to attempt to go into too much detail at present would be a mistake. Any new pattern would develop gradually over a period of 10 or more years and as higher education is in a state of flux it would be unwise to assume that the current configuration of institutions will remain frozen.

Certainly it would be wrong to assume that any more explicit elite sector would be synonymous with the 44 universities. This is not a plea for the restoration of university hegemony.

First, 44 is almost certainly too many institutions for an elite sector which would receive priority in the distribution of resources. Between 20 and 25 seems a more appropriate number. Secondly, there is no reason why polytechnics or even centres of excellence in teacher education should not be included.

How would such a tripartite system be organized and regulated? The first requirement would be for a much stronger Government voice, capable for a separate department for higher education and science with its own minister.

The present structure of the Department of Education and Science with separate branches for teacher education, advanced education and university education, under a single Minister, State, whatever the personal qualities of the present incumbent, without the independence of his own department, will not do.

Only with this strengthening of the Government machinery could a start be made to introduce more discrimination into the planning and control of higher education.

However, this would need to be balanced by a reform of the University Grants Committee. Its membership would have to be widened to include representatives from the previous non-university sector and its role changed.

Humanism and mathematics



Ubiquitous calculus

those in function theory seek
fresh fields to conquer.

C. W. Kilmis

tion in illuminating the background of Renaissance Italy in which mathematics was developed. The book is clearly the result of ma-



appears, on the whole, to have been the lesser mathematicians who placed most emphasis on the pursuit of Greek sources and who despised the scholastics and scorned the *calculatores*.

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Shelley debate

have been made more exciting by eliminating some of the weaknesses

congratulated on concentrating attention on the most important critical questions and on organizing a number of voices into a structure which has the cohesiveness of a continuous argument.

detail with reference to the *Canterbury Tales* in a recent book; and J. Leyerle on "Thematic Interference in the *Canterbury Tales*." This notion of "interlace" is of course one of the more heavily worked analogies between medieval art and

ography of Mrs Gaskell. The life speaking so poignantly for itself, the biography is admirable in its

Chaucer and the facts of life

notion of "interlace" is of course one of the more heavily worked analogies between medieval art and

Professor Stanley's intention in his essay on Trolius, is, as he puts it, to "bolster up" that hero. The major problem underlying a workmanlike and serious attempt to do justice to Trolius is that it simply

th a more recent in-
ryct Jones. It is a pity that no
ect bibliography included has re-
en brought up to date, nothing
er 1955 being mentioned.

The two chapters on ordinary and partial differential equations are in the same style as the first two chapters. The applications are to

C. W. Kilmister

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Classified Advertisements

Index to Appointments Vacant, Wanted and other classifications

With 286 maps covering subjects ranging from demographic to cultural characteristics, military history, and architecture, an *Atlas of Early American History: The Revolutionary Era, 1750-1790*, has been compiled by Lester K. Born, Barbara Petchenik and John Hanson, Jr. Arranged chronologically, the maps cover three periods: the colonial years pre-1776, the War of the American Revolution, and the post-war years. It is published by Princeton University Press and priced at \$22.50 until 31 December, 1976 thereafter \$72.00.

Goodhart, covers the same ground in a much more general way but devotes more space to developing ideas since 1970 and 1974. He writes in a satirical and referential style as a politician. It is not quite as rigidly, that referendum is likely to have a conservative influence on public policy. The MP for Deal about the Inner London Council of the Conservative party but his views seems restrained by discretion. He about have said more, for example, of the role of the teacher's activity or lack of it during the campaign. The third volume comprises a set of essays produced by Social and Community Planning Research which discuss how public opinion on the Common Market fluctuated during the years 1961-1967.

An outstanding feature of the referendum results was their high level of uniformity, especially in England and Wales. The pattern was quite different from the pattern was quite different from the division of support for the main parties at a general election. Why was this so? The chief reason offered in these books is the leadership principle. It was too complex an issue for the majority to make personal deci-

Like many others, both inside and outside the economics profession, they are seriously misled by the bias and limitations of conventional cost-benefit analysis, paragoned as it was applied in the projects by the World Bank. For some time now, the leading economists have grown accustomed to the use of "shadow prices" in investment appraisal to deal with the widespread divergence between "real costs" and market prices in developing countries, and particularly in relation to unemployment and employed reserves of labour and in relation to foreign exchange costs. Squire and Van der Tak take the shadow commonplace practices a step further. They attempt systematically to "water-bat" the whole investment appraisal process in favour of projects which lead to income redistribution and growth. They do by an elaborate system of "shadow prices" and "shadow costs". Although they disavow the cookbook approach to investment appraisal, one is left with an impression of technical complexity obfuscating their original praiseworthy and straightforward objective. This, when they state, frankly recognize, "An effort has been made to make the subject accessible to a

wide audience. . . must be said that the book is not entirely correct because the issues are "more complex."

This particular group, World Bank *et al.*, is trying to say that some of the steps of investment in capital countries. They are correct we all should be, it is one of many developments that have occurred in the past few years. They are right in their belief that the right to contribute less to the nation and growth with the countries that is composed and that the contribution of the world are consistent.

Moreover, they have in arguing that traditional methods of attempting to achieve distribution by accumulation are not successful, and that new methods might be effective.

Many are the pitfalls of calculations, and of the difficulties of measuring the intangibles. One would think that this would lead to a greater degree of political and social context in investment appraisal. But, when they are aware of this, who whose process is clearly not can be manipulated. The of the process is a process achieving the such objectives which they set. A technical is so esoteric that a limited and discussion to small practitioners is unlikely to welfare objectives and authors embrace. Yet the intent on technical refinement technique, to establish respectability in the tend to ignore this fundamental point. Cost-benefit techniques cannot be divorced from the political context and procedure within which they are applied.

Margaret S. Baron, head of the department of mathematics at Stockholm College, is author of <i>The Origins of the Infinitesimal Calculus</i>. W. R. Butter, Regius Professor of English at the University of Glasgow, has published editions of Shelley's poems. John Harvey, fellow of Emmanuel College, Cambridge, is author of	<i>Novelists and their Illustrations</i>. C. W. Kilminster is professor of mathematics at King's College London. Professor Gilbert Ryle is Wadsworth Professor of the Philosophy at the University of Oxford, has written <i>The Philosophy of Mind</i>, <i>Dilemmas and Pleasures</i>.
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Detailed applications including a curriculum vitae and naming three referees should be sent as soon as possible to the Registrar, University of the West Indies, Mona, Jamaica. Further particulars of the post may also be obtained from the Inter-University Council for Higher Education Overseas, 80-81 Tottenham Court Road, London, W1P 0NT.

Return fares are paid. Local contracts are guaranteed by the British Council. Please write, briefly stating qualifications and length of appropriate experience, quoting relevant reference number and title of post for further details and an application form to The British Council (Appointments), 65 Davies Street, London W1Y 2AA.

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For details and application forms available from the Staff Secretary, West Theatre, Trinidad, and the person who will receive applications up to Friday, 1st October, 1978.

[illegible]

Applications are invited for the appointment of Maintenance Officer in the Estate Organisation of the University. Appointees must be B.Sc. holders; membership of the R.I.C.O. (Building Section) would be an advantage. The successful applicant will be responsible to the Director of Works for all aspects of the maintenance of the buildings of University properties and the general upkeep of grounds and lawns.

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